# Grants by Grant Cycle

**Grants matching your search for *2014-15 Tire-Derived Aggregate Grant Program (TDA4 )***

## Butte County

**Grantee:** Butte County

**Amount Awarded:** $42,519.00

**Grantee Contact:** Mr Steve Rodowick

**CalRecycle Grant manager:** Farrah Fadrigon

**Project Summary:** Butte County Public Works will utilized tire-derived aggregate product for two projects: the landfill gas collection systen as well as a leachate injection project at the Neal Road Landfill. (Swis#04-AA-0002)
The landfill gas collection project will require appoximatley 500 tons of TDA type A. The leachate injection project will require approximately 333 tons of TDA type A. Both projects are slated to start in June/July of 2015 and will continue until completion. We anticipate project completion by June/July of 2016. The County has secured the services of Golder and Associates to complete the plans for these projects.

*Total Awarded for County:$42,519.00*

## Sacramento County

**Grantee:** Sacramento County

**Amount Awarded:** $49,004.00

**Grantee Contact:** Mr. Timothy Israel

**CalRecycle Grant manager:** Loreto Tamondong

**Project Summary:** Use of Type A TDA as permeable backfill material in horizontal landfill gas collection trenches and leachate recirculation trenches.

*Total Awarded for County:$49,004.00*

## Santa Clara County

**Grantee:** Santa Clara Valley Transportation Authority

**Amount Awarded:** $300,580.00

**Grantee Contact:** Lorena Bernal-vidal

**CalRecycle Grant manager:** Victoria Rocha

**Project Summary:** Project Summary:
The Santa Clara Valley Transportation Authority (VTA) plans to install approximately 4,200 tons of tire derived aggregate (TDA) material under the 10.15 miles of rail tracks for the future passenger rail extension of the Bay Area Rapid Transit (BART) system into Santa Clara County in California. This project is known as the Silicon Valley Berryessa Extension (SVBX). The SVBX Project includes the construction of two new stations (Milpitas and Berryessa) and will connect to the rail tracks south of the planned BART to Warm Springs Station in the City of Fremont in Alameda County (expected opening fall 2015) and then will proceed on the former Union Pacific Railroad (UP) right-of-way (ROW) and end near Las Plumas Avenue in the City of San Jose.

The planned double-track grade-separated electrified third-rail guideway will transverse in and out of business parks, industrial sites and residential neighborhoods. It will make its way through different terrains, elevations and depths, some strategically patched with cut and fill along the corridor. It will cross bridges over Mission Boulevard, Warren Avenue, and Kato Road. It will run below-grade under Dixon Landing Road, Montague Expressway, Capitol Avenue, Trade Zone Boulevard, Hostetter Road and under the intersection of Sierra Road and Lundy Avenue. Then it will return to grade right before ascending on to an elevated structure crossing over Berryessa Road. It will transition to retain fill, cross over Berryessa Road and enter into an elevated Berryessa Station with its concourse at-grade. The guideway then will cross over Mabury Road where it will transition back onto retained-fill and terminate at-grade between Mabury Road and Highway 101 on an alignment that will allow for a tie-in to the future extension of BART, Silicon Valley Santa Clara Extensions , through downtown San Jose to the future Santa Clara Station.
When passenger service begins, up to 10-car trains on frequencies of approximately 7 ½ minutes, will be operated during peak commute periods on two BART lines: Green Line (Berryessa – Daly City) and Orange Line (Berryessa – Richmond). The extension will also include light rail intermodal improvements at the Milpitas Station and new high frequency feeder bus service to connect the Berryessa Station to downtown San Jose and the City of Santa Clara.

SVBX's Need for Tire-Derived Aggregate (TDA):

TDA is extremely important to the success of the SVBX project. In accordance to State and Federal regulation, a study was performed during the SVBX Project's environmental process to analyze the noise and vibration impacts this new passenger rail could impose on the neighborhoods along the corridor using the Federal Transit Administration's (FTA) Noise Impact Criteria. For residential land uses, the FTA criterion for ground-borne vibration has a specific threshold measured at 72 vibration velocity levels in decibels relative to 1 micro inch per second. For buildings that are primarily used for offices, the FTA criterion for ground borne vibration is 84 vibration velocity levels in decibels relative to 1 micro inch per second. Based on this study, it was concluded that a total of 157 to 172 single-family homes and 36 to 40 multi-family buildings would be affected without mitigation along the alignment. Based on the severity of the impact (ranked at severe or medium intensity) different engineering solutions have been recommended to mitigate it.

TDA and floating slab track with a design frequency of 8 Hz were the recommended vibration mitigation for the residences and offices affected for all of the design options. The approximate length of mitigation needed varies slightly depending upon the option selected. The use of TDA as an underlayment beneath ballast and tie track as a means for reducing wayside ground borne vibration was both practical and viable. In fact, the overall performance from three independent sets of tests was that the reduction of wayside ground borne vibration due to transit train passbys was generally superior to that of ballast mat. Based on these results, project engineers recommended the use of TDA on eight specific segments of the SVBX Project. The track charts on Attachment 1 show where these segments are located. This recommendation was formalized with the project's approval of the Final Environmental Impact Report in 2010.

TDA Material and Specifications Required for the SVBX Project:

Now that SVBX project construction is underway, a bid solicitation has been put out through an existing contractor, Skanska-Shimmick-Herzog JV (SSH), for the purchase and installation of the TDA material with the following specifications:

• Material Description of TDA: the material shall be made from scrap type A shreds, free of any contaminants such as oil and grease that could leak into the groundwater or create a fire hazard. Tire shreds shall not contain remains of tires that have been subjected to fire. Tire shreds shall have no more than one percent, by weight, of metal fragments which are embedded fully or partially in the rubber. Metal fragments that are partially embedded in rubber shall not protrude more than one inch form the cut edge of the tire shred on 75 percent of the pieces, by weight, and not more than two inches on 100 percent of the pieces.

• Material Specification of TDA: Type A tire shreds shall have a maximum dimension, measured in any direction, of eight inches. Type A tire shreds shall have 100 percent, by weight, passing the four inch square mesh sieve, a minimum of 50 percent passing the two inch square mesh sieve, and a maximum of five percent passing the number four sieve. The place density required is 52.91 pounds per cubic foot.

TDA Project Quantities and Cost:

VTA is seeking $300,580 in TDA Grant funding to subsidize the cost of the material and installation for approximately 4,200 tons TDA material for the SVBX project. The quantity TDA needed was calculated based on cross-section dimensions and material volume listed in Attachment 2 and results in 4,176 tons. Please see Attachment 3 representing typical cross sections where TDA is to be used.

Based on the required 4,176 tons of TDA needed, the following cost calculations were developed:
Delivered Cost:

| Weight (tons) | X Delivered Cost* ($ per ton) | = Material Cost ($) |
|---|---|---|
| 4,176 | $55 | $229,680 |

* Current Price Estimate

Installation Cost:

| Weight (tons) | X Installation Cost 1 ($/ton) | = Installation Cost ($) |
|---|---|---|
| 4,176 | $7.50 | $31,320 |

1 Maximum for reimbursement is $7.50

| Engineering Cost 2 | Testing Cost3 |
|---|---|
| $34,580 | $5,000 |

2Maximum of 13% of the combined total cost of materials, installation and testing
3Testing costs cannot exceed $5,000 per project category.

Calculation for Requested Grant Amount:

| Qualifying Categories | Allowable Costs |
|---|---|
| Materials | $229,680 |

| | |
|---|---|
| Installation | $31,320 |
| Engineering | $34,580 |
| Testing | $5,000 |
| Total | $300,580 |

Proposed TDA Delivery and Installation Schedule:
If VTA is successful in receiving this grant and based on the SVBX Project's construction schedule, the expected TDA delivery would be as follows:

o For segments numbered 200+00 to 266+00, delivery would be Feb/Mar 2015
o For segments numbered 173+00 to 180+00, delivery would be Apr/May 2015
o For segments numbered 418+00 to 449+00, delivery would be May/Jun 2015

As mentioned earlier, VTA has contracted with Skanska-Shimmick-Herzog JV (SSH) to manage the TDA procurement and installation for this project and has granted full access to VTA's property (the future SVBX corridor). In Attachment 4, you will find the letter from VTA to SSH stating this access. SSH will commence installation as soon as the funds are secured and have an expected completion of January 2016.

In closing, VTA staff is confident that utilizing TDA material under the 10.15 miles of rail tracks for the future passenger rail will effectively reduce noise and vibration and significantly improve the quality of life of the communities working and residing along the corridor. Passenger service for this SVBX extension is planned to start in 2018 and will carry approximately 23,000 average weekly riders on a swift and comfortable ride along the region's three major metropolitan centers: San Jose, San Francisco, and Oakland. In addition to the noise and vibration mitigation TDA material offers, VTA fully supports the opportunities this TDA Grant Program provides to prevent illegal tire dumping and promote markets for recycled-content tire products.

*Total Awarded for County:$300,580.00*

## Sonoma County

**Grantee:** Sonoma County

**Amount Awarded:** $40,950.00

**Grantee Contact:** Ray Glanton

**CalRecycle Grant manager:** Victoria Rocha

**Project Summary:** TDA will be used in lieu of permeable structural soil for the construction of new bioretention trenches for stormwater management. An estimated amount of 500 tons of TDA is anticipated to be installed during Summer 2015 to Spring 2016.

*Total Awarded for County:$40,950.00*

**Grant Count: 4** **Grand Total for Selected Counties: $433,053.00**